

8-9: Binomial Probabilities

Warm-up: 1. Write all the possible permutations of heads and tails when a coin is tossed three times.

2. If the probability of heads is .6, find the probability of each outcome in question 1.

Binomial Experiment:

1.

2.

3.

4.

5.

Example 1: The probability of getting a sum of 7 in a toss of two fair dice is known to be $\frac{1}{6}$.

a. What is the probability of getting exactly two sums of 7 in 5 tosses?

b. What is the probability of getting at least two sums of 7 in 5 tosses?

Binomial Probability Theorem:

Example 2: What is the probability of getting at least 8 of 10 questions on a test correct, if you feel you have an 80% chance of answering each individual question correctly?

Binomial Probability Distribution:

Example 3: Determine the probability distribution from the binomial experiment in example 1.

Homework:

*“Disconnecting from change does not recapture the past. It loses the future.” –
Kathleen Norris*